

**Abstract**

Copper(I) formate complexes of the formula  $L_nCu(HCOO) \cdot x HCOOH$ , where  $x$  is from 0 to 10,  $n$  is 1, 2, 3 or 4 and the  $n$  ligands  $L$ , independently of one another, are each one of the following ligands:

- a phosphane of the formula  $R^1R^2R^3P$ ;
- a phosphite of the formula  $(R^1O)(R^2O)(R^3O)P$ ;
- an isocyanide of the formula  $R^1-NC$ ;
- an alkene of the formula  $R^1R^2C=CR^3R^4$ ; or
- an alkyne of the formula  $R^1C\equiv CR^2$ ;

where  $R^1$ ,  $R^2$ ,  $R^3$  and  $R^4$ , independently of one another, are hydrogen, a linear or branched, optionally partly or completely fluorinated alkyl, aminoalkyl, alkoxyalkyl, hydroxyalkyl, phosphinoalkyl or aryl radical of one to 20 carbon atoms;

with the exception of triphenylphosphinocopper(I) formate and 1,1,1-tris(diphenylphosphinomethyl)ethanecopper(I) formate;

are decomposed for depositing metallic copper.